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## WHAT IS CLAIMED IS:

1. A non-volatile data storage interface unit, for use in an information distribution system configured to distribute information assets stored upon a non-volatile data storage to users via a dynamic data transmission path including a cell-based switching fabric, the interface unit comprising:

a cell transceiver connectable to a cell-based switching fabric facilitating transfer of data cells between the non-volatile data storage interface unit and the cell-based switching fabric, the cell transceiver comprising:

a cell transmitter coupled to an output of the non-volatile data storage interface unit and comprising a raw data to cell data formatting circuit, and

a cell receiver coupled to an input of the non-volatile data storage interface unit and comprising a cell data to raw data formatting circuit; and

a first non-volatile data storage controller interposed between the cell transceiver and the non-volatile data storage, the non-volatile data storage controller comprising circuitry for:

retrieving and forwarding raw data from the non-volatile data storage to the cell transmitter, and

receiving and storing raw data from the cell receiver to the non-volatile data storage.

- 2. The non-volatile data storage interface unit of claim 1 further comprising a data buffer controller coupled to the first non-volatile data storage controller, the data buffer controller comprising an interface to random access memory for storing at least raw data retrieved from the non-volatile data storage by the first non-volatile data storage controller prior to transfer to the cell transmitter, thereby providing a data transmission rate smoothing interface between the non-volatile data storage and the cell transmitter.
- 3. The non-volatile data storage interface unit of claim 2 wherein the data buffer controller further comprises an interface to random access memory for storing raw data to be stored on the non-volatile data storage.

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- 4. The non-volatile data storage interface unit of claim 1 wherein the cell-based switching fabric is an ATM switching fabric.
- 5. The non-volatile data storage interface unit of claim 1 wherein the cell-based switching fabric is a connection-oriented fabric.
  - 6. The non-volatile data storage interface unit of claim 1 wherein the cell transmitter is coupled to a plurality of non-volatile data storage controllers, including the first non-volatile data storage controller.

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10 20 13 7. The non-volatile data storage interface unit of claim 1 wherein the cell transmitter comprises circuitry for generating a header for a cell comprising raw data retrieved from the non-volatile data storage.

8. The non-volatile data storage interface unit of claim 7 wherein the circuitry for generating a header includes a CRC generator.

- 9. The non-volatile data storage interface unit of claim 8 wherein the circuitry for generating a header includes an HEC generator.
- 10. The non-volatile data storage interface unit of claim 1 wherein the cell receiver comprises circuitry for processing a header for a cell received from the cell-based switching fabric.
- The non-volatile data storage interface unit of claim 10 wherein the circuitry for processing a header includes a CRC accumulator.
  - 12. The non-volatile data storage interface unit of claim 11 wherein the circuitry for processing a header includes an HEC accumulator.

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13. A method for transmitting data within an information distribution system configured to distribute information assets stored upon a non-volatile data storage to users via a dynamic data transmission path including a cell-based switching fabric, the method comprising, in any order, the steps of:

receiving, by a cell receiver, a data storage asset read command from the cell-based switching fabric;

passing, by the cell receiver to a non-volatile data storage controller, the data storage asset read command;

retrieving, from a non-volatile data storage controlled by the non-volatile data storage controller, raw data corresponding to the data storage asset read command;

first transmitting the raw data to a cell transmitter circuit;

packaging, by the cell transmitter circuit, the raw data within cells for transmission on the cell-based switching fabric; and

second transmitting, by the cell transmitter circuit, the cells to the cell-based switching fabric.

14. The method of claim 13 further comprising the step of:

storing, within a memory buffer prior to the first transmitting step, at least the raw data retrieved from the non-volatile data storage by the non-volatile data storage controller prior to transfer to the cell transmitter, thereby providing a data transmission rate smoothing interface between the non-volatile data storage and the cell transmitter.

- 15. The method of claim 13 wherein the second transmitting step comprises transmitting the cells to an ATM switching fabric.
  - 16. The method of claim 13 wherein the cell-based switching fabric is a connection-oriented fabric.

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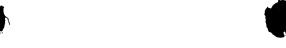
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- 17. The method of claim 13 wherein the packaging step comprises generating, by circuitry within the cell transmitter circuit, a header for a cell comprising raw data retrieved from the non-volatile data storage.
- 18. The method of claim 17 wherein the generating a header step includes generating a CRC value for a cell.
- 19. The method of claim 18 wherein the generating a header step includes generating an HEC value for a cell.

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20. A method for receiving data within an information distribution system configured to communicate information assets from a non-volatile data storage to users via a dynamic data transmission path including a cell-based switching fabric, the method comprising, in any order, the steps of:

receiving, by a cell receiver connected to the cell-based switching fabric, a data storage asset write command from the cell-based switching fabric;

passing, by the cell receiver to a non-volatile data storage controller connected to the cell receiver, the data storage asset write command;

receiving, by the cell receiver, data cells specifying a hard disk address and raw data; extracting, by the cell receiver, the raw data from the data cells;

transmitting, by the cell receiver, the raw data to the non-volatile data storage controller; and

storing, by the non-volatile data storage controller connected to the non-volatile data storage, the raw data to the non-volatile data storage.

21. The method of claim 20 further comprising the step of:

first processing, by the cell receiver, a header for a cell received from the cell-based switching fabric.

- 22. The method of claim 21 wherein the first processing step comprises processing header data by a CRC accumulator.
- 23. The method of claim 22 wherein the first processing step comprises processing header data by an HEC accumulator.
  - 24. The method of claim 20 further comprising the step of:

buffering, by the non-volatile data storage controller, the raw data from the data cells prior to the storing step.